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(54) **ELECTROCATALYTIC CATHODE DEVICE OF PALLADIUM AND IRIDIUM ON A HIGH DENSITY OR POROUS CARBON SUPPORT AND A METHOD FOR MAKING SUCH A CATHODE**

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(58) **Field of Search** 205/102, 103, 205/104, 159, 257

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(57) **ABSTRACT**

The present invention relates to a method of producing an electrocatalytic cathode for use in an electrochemical cell system comprising the steps of providing a carbon substrate and simultaneously depositing palladium and iridium on the carbon substrate by cyclic voltammetry or by controlled potential coulometry. The simultaneous deposition of the palladium and iridium is preferably carried out using a solution containing 1.0 mM palladium chloride, 2.0 mM sodium hexachloroiridate, 0.2M potassium chloride, and 0.1M hydrochloric acid.

12 Claims, 5 Drawing Sheets